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ABSTRACT

This paper explains one university's approach to explicit modeling of practice. It briefly outlines the university's conception of episteme and phronesis, then explores the university's views of explicit modeling, which is seen as operating concurrently at two levels. At one level, it is about teacher educators "doing" in their practice what they expect their students to do in their teaching. This means they must model the use of engaging and innovative teaching practices, rather than deliver information about such practice through traditional approaches. At another level, there is a need to offer student teachers access to the pedagogical reasoning, feelings, thoughts, and actions that accompany practice across a range of teaching and learning experiences. Teacher educators make such access available in a variety of ways, through think-alouds, journaling, discussions during and after class with groups and individuals, and questioning, probing, and inquiry created through pedagogic interventions during teaching and debriefing of shared teaching and learning experiences. Four areas articulated through the university's experiences include: professional critique offers ways of seeing into experience; seeing different types of teaching decisions in action helps highlight the problematic nature of teaching; genuinely searching for differences between actions and intent; and valuing collaboration and co-teaching. (Contains 23 references.) (SM)

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Modelling by Teacher Educators

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There have been consistent calls throughout the literature for teacher educators to pay attention to their own experiences in order to better understand how to approach teaching about teaching so that students' learning about teaching might be enhanced. Guilfoyle (1995) notes the inherent importance of "Walking the Talk", Schiller & Streitmatter (1994) and Loughran (1996) examine "Practicing what I Preach", while Adler (1993) implores teacher educators to become reflective practitioners, "an idea that has permeated teacher education" (p. 160). Further to this, Heaton & Lampert (1993) note that, "We also need to learn about how to teach teachers to put these practices into effect and how to prepare teacher educators to work in ways that are consonant with the kind of teaching envisioned in reforms" (p. 43). In part, it could well be argued, that this questioning of approaches to teaching about teaching that abound in the literature can be addressed through self-study (see Hamilton, 1998).

Self-study, as Kosnik (2001) explains, comprises an obligation that practitioners themselves should work in the very way they advocate for their students. Accompanying this expectation is that by doing that which one advocates for one's students, so it will offer insights into teaching and learning that might otherwise not be fully appreciated or understood if such learning was not genuinely experienced by oneself. Therefore recognizing the importance of learning through experience in order

to better inform oneself about practice can be a powerful catalyst for inquiry for many involved in teacher education.

Despite the connotations about individuality that may be conjured up by the use of the term self-study for such inquiry, it is important to note that beyond an individual's desire to be better informed about how they think and act (to purposefully reframe (Schön, 1983) their practice), is an expectation that learning through self-study might also help to positively challenge and change teaching and teacher education practices more generally. Wilkes (1998) makes this very point in her exploration of paradoxes in teaching. Her study illustrates how she is constantly driven to make her learning move beyond herself and to be available and helpful to others (students and colleagues). Changing practices and programs is then a 'big picture' purpose that engages and sustains many involved in the self-study of teaching and teacher education practices.

> Research on teaching practice by teachers holds invaluable promise for developing new understandings and producing new knowledge about teaching and learning. Formalizing such study of practice through self-study is imperative...The value of self-study depends on the researcher/teacher providing convincing evidence that they know what they claim to know. (Hamilton & Pinnegar, 1998, p. 243)

Without formalizing research on teaching, without illustrating the evidence that informs approaches to practice, without pushing the boundaries of knowledge of teaching and learning about teaching, change is not likely to be enacted beyond the individual. Hence, in an attempt to explain our learning through self-study and to thus formalize that learning, this paper is intended to offer our ideas, insights and approaches to teaching about teaching in order that they might be shared with, and

interrogated by others, in order to further develop understandings of teacher education practices.

Purpose of the paper

The main purpose of this paper is to explain our approach to what we describe as professional critique and pedagogic interventions as forms of explicit modelling which we argue result in "meta-learning" - a most valuable form of learning about learning for both teacher educators and student teachers. We believe that the ability to articulate the purposes underpinning practice for oneself and others is a desirable professional competency to be developed by both teacher educators and student teachers. However, even though it may well be desirable, it needs to be recognized that it is complex and difficult to do and is particularly difficult to develop alone.

The ability to be explicit about what one is doing and why is enhanced through systematically inquiring into learning from experience (through self-study) so that the relationship between knowing and doing might be more accessible (thus addressing the theory-practice gap). Importantly though, learning from the experience of 'being explicit' requires a sensitivity to the ongoing tensions associated with balancing student teachers' perceived needs and concerns and their teacher educator's beliefs about what they to need know and be able to do.

Structure of the paper

This paper is structured in such a way as to illustrate our approach to, and understanding of, explicit modelling of practice. To do this, we begin with a brief

outline of our conceptualisation of episteme and phronesis (Korthagen et al, 2001) for, it is partly as a result of our understanding of these concepts that we have come to articulate our approaches to, and purposes in, teaching about teaching. We then explore our views of explicit modelling which we see as operating concurrently at two levels. At one level, explicit modelling is about us "doing" in our practice that which we expect our students to do in their teaching. This means we must model the use of engaging and innovative teaching procedures for our students rather than "deliver" information about such practice through the traditional (and often expected) transmissive approach. At another level there is also a need to offer our student teachers access to the pedagogical reasoning, feelings, thoughts and actions that accompany our practice across a range of teaching and learning experiences. We make such access available in a variety of ways, through 'thinking aloud' (see Loughran, 1996), journaling, discussions during and after class with groups and individual student teachers (see Berry, 2001; Berry & Loughran, 2002), and, the main focus for this paper, through the questioning, probing and inquiry created through our pedagogic interventions during teaching and de-briefing of our shared teaching and learning experiences. Accessing these views we see as offering participants a form of 'meta-learning'; learning beyond the immediate and uncovering learning about the learning and teaching being experienced.

Meta-learning is an important issue for us as we take seriously the need for our student teachers to be invited to deliberately reflect on the relationship between teaching and learning intents, purposes and actions inherent in our shared teaching experiences. Both of these aspects of modelling are developed through the use of professional critique and pedagogic intervention (through which meta-learning can be

personally profound). Professional critique involves constructive criticism of our (student teachers and teacher educators) approaches to teaching and learning while pedagogic interventions are those actions we take that are intended to impact on student teachers' teaching.

In order for these aspects of explicit modelling to be laid out for the reader, we consider them first from a teacher educator's then from a student teacher's perspective. The paper unfolds by considering these perspective in light of the learning through self-study that has emerged for us as well as offering insight into some of the features of teaching and learning about teaching that we are beginning to articulate as a result of our extended self-study journey (at present, a four year longitudinal collaborative study of practice).

In the following section, we introduce episteme and phronesis in order to situate our work within a framework that we have found helpful in understanding and explaining our development of knowledge of practice in teacher education.

Episteme and phronesis

Korthagen et al (2001) examine the relationship between theory and practice by outlining three basic assumptions that appear to underpin what they describe as traditional teacher education programs. These three basic assumptions are that theories help teachers to perform their role; these theories are based on scientific research; and, teacher educators should make a choice concerning the theories to be included in teacher education programs. Korthagen goes on to explain how these

assumptions are at the heart of the technical-rationality model and that it not only has serious flaws but that it creates and/or exacerbates the well documented theory - practice gap. His response to the technical-rationality model, developed over many years, is the Realistic Teacher Education program.

The Realistic Teacher Education program has been (and is still) developed by paying careful attention to the nature of theory and practice with regard to both its value and place in learning to teach and, thus, develops the ideas of the applicability of Theory with a big T (episteme) and theory with a small t (phronesis). Through a conceptualization of teacher education whereby moderating the way that theory is appropriate and useable, Korthagen illustrates how the Realistic Teacher Education program helps participants (teacher educators and student teachers) develop their understanding of professional practice.

One way in which this moderation between theory and practice occurs is through the ALACT model (a reflective practice approach, see Korthagen, 1985) and it is the underpinnings of practice such as this that leads to his call for others to similarly challenge teacher education through thoughtful and informed teaching and learning approaches. Korthagen et al's (2001) extensive description of Realistic Teacher Education, the imbedded research that shapes the approach and, the importance of understanding the value and use of episteme and phronesis, is an example of how teacher educators can research their own teaching about teaching such that they might begin to articulate a pedagogy of teacher education. Korthagen's approach is a valuable lens for examining and better understanding how episteme and

phronesis can be useful tools for interpreting and directing learning through experience.

Korthagen et al (2001) describe episteme (Theory with a Big T) as expert knowledge on the particular problem that is connected to a scientific understanding of that problem. Episteme is therefore propositional (consists of a set of assertions) that apply generally to many different situations and is frequently formulated in abstract terms. Phronesis (theory with a small t) is practical wisdom that is primarily concerned with, "...the understanding of specific concrete cases and complex and ambiguous situations" (p. 24).

This differentiation between episteme and phronesis becomes increasingly clear in situations where problems from practical experience do not seem to be able to be resolved through solutions available from theoretical research knowledge. For many teacher educators, this is an ever present feature of their teaching context. For example, "It [problem] can stimulate a student to look for instructional ideas in handbooks or even in research studies. But sometimes - more often than we wish - it does not seem to help. What seems obvious to the teacher educator is not so to the student teacher...there is an unbridgeable gap between our words and the student's experiences" (Korthagen et al., 2001, p. 22).

In many cases, this situation whereby, "what seems obvious to the teacher educator is not so to the student teacher" and being confronted by *the unbridgeable gap between words and experiences*, may lead some teacher educators to adopt a "teaching as telling, showing, guided practice approach" (Myers, 2002). However,

doing so simply exacerbates the *gap between words and experience* as it reinforces a sense of "being told what to notice/learn" and therefore further diminishes the possibilities for genuine learning about teaching. Yet by purposefully addressing the tensions and dilemmas inherent in practice, through a recognition of the place of both episteme and phronesis, teacher educators can come to better understand teaching about teaching and, student teachers are also more likely to come to better understand how to approach the practical problems they wish to address.

Context

For the past four years we have developed and co-taught a double degree pre-service teacher preparation subject titled *Developing Pedagogy*. Developing Pedagogy has been organized with a curricular focus based on explicitly modelling particular aspects of teaching so that we can "unpack" these aspects of teaching through professional critiques of practice. Consequently, our research of our teaching has helped us to conceptualize our growing understanding of our knowledge of practice through an articulation of tensions (see Berry, Forthcoming) and assertions (see Loughran, 2002).

We do not intend to revisit the structure and nature of *Developing Pedagogy* in this paper (for a detailed description, see Berry & Loughran, 2002) but rather, to concentrate on the nature of professional critique and the development of explicit modelling that accompanies this view of teaching and learning about teaching. We trust that in so doing, the approaches to practice that we detail might then be informative for others' teaching about teaching and, consequently, their students'

learning about teaching. We begin with a vignette about our initial modelling of professional critique as an entrée to explicit modelling.

Setting the Scene

In planning for today's class, we have carefully considered the purpose of the session and discussed in detail features of the experience that we think will be important to support this purpose. To begin, there is the need to build trust and rapport with the class quickly and to illustrate our openness and acceptance to others' views and ideas; thus non-judgmental responses to questions, comments and responses are crucial. We also know it is important to make clear our approach to the students at some stage in the session. For this class we have decided to use a POE teaching procedure (Predict, Observe, Explain) - although it could be any teaching procedure for it is the engagement in learning that is crucial.

We have already discussed the roles each will assume - one of us will conduct this initial teaching experience with the class and the other will then de-brief the teaching through pushing and probing the teacher's purposes, practices and teaching behaviours. Through this process, the de-briefer will then be both modelling professional critique and inviting the student teachers to begin to do likewise.

Being the teacher in this situation is risky for it creates a vulnerability in practice not common in teacher education, as exposing one's practice and genuinely seeking critique is a challenge to the traditional 'expert' status of the teacher educator. Initially this situation can also appear contradictory for student teachers whose previous experiences in university classes often discourages them from questioning a teacher's pedagogical purposes and practices. However, teaching is not the only risk. De-briefing is also difficult. The debriefer needs to explicitly model professional critique, and in so doing, help to bring the student teachers to consider how they will appropriately form their own questions and comments about the teaching episode so that they are professional, not personal; and, through this process, attempt to uncover the teacher's pedagogical reasoning, feelings and beliefs about practice that underpinned the teaching situation. This then enables all participants to begin to reflect upon the episode in a meaningful way. There is an obvious risk for students, here. They are being encouraged to honestly speak out in ways that challenge their traditional role as passive learners. We need to be mindful of consistently affirming and encouraging their "voice", hence the need for careful consideration of our own teaching behaviours and our responses and how they might be interpreted by others.

The session begins....

After briefly outlining the purpose of the session to the students (to experience a teaching situation then to publicly "unpack it") the teacher introduces, in this case, a P.O.E. Holding two sheets of paper the teacher asks the class to predict what will happen when he blows a constant stream of air down between the sheets. Through working with the predictions, attempting to encourage those who are not confident to make a prediction, and generally trying to engage and motivate students, the teacher eventually conducts the experiment so that the predictions can be tested. The students are invited to note what they see and to record this briefly in writing. A short open-ended discussion of the observations ensues, followed by a more intense discussion based on the different explanations that students offer to explain the outcome of the experiment.

Throughout this episode, the de-briefer pays careful attention to: aspects of the teaching procedure; the way the teacher questions and responds to students' comments; the manner in which students appear engaged or otherwise; and so on, in order to question the teacher about these aspects in the de-brief.

At the end of the POE, most of the students appear to have enjoyed the experience. As the de-brief begins, the issue of enjoyment is raised. The de-briefer asks the class about the experience. How did they feel about it? 'Fun' is a common response. The de-briefer draws attention to this point and turns to the teacher asking if the session was meant to be fun. There is some discussion about this point between the teacher and debriefer as ideas of engagement and interest are raised and, eventually, it emerges that fun is not the same as engagement, and that if fun is all that has happened then the teacher's purposes have not been achieved. This idea is pushed around a little further as the de-briefer continues to uncover more about the teacher's approach, but continually returning to the underlying purpose of engagement and that enjoyment is only one way of encouraging such engagement.

The de-briefer also asks the teacher questions about the structure of the POE and his feelings associated with different aspects of students' responses and non-responses. There is some discussion about how the POE worked and the value of students being committed to their views through writing their predictions, observations and explanations. She begins to subtly bring the students into the de-brief as their reactions to the session are highlighted. After some thoughtful questioning by a couple of students, the de-briefer calls for a momentary pause in proceedings and asks a student to explain the thinking behind a question she has just made to the teacher. The de-briefer carefully phrases her enquiry as she asks the student to explain what led to her

question and whether it was linked to the way she was feeling and responding to the teaching during the session.

The student is concerned that her negative feelings about science (she did not like science as a subject at school) led her to 'switch off' her interest in the experiment before it even started. She knew she didn't like science, so why would she bother now? Discussion then followed about the effect of some of the teacher's behaviours that were helpful and not so helpful in encouraging/discouraging her involvement in the experience. Then another student asked the teacher if there were any situations during the teaching that he was concerned about and if there were any student responses/reactions that caused him to think again about what was happening or to feel as though things were not "going as expected". And, if so, what he had done about it. The de-briefer was now feeling much more comfortable with her modelling role as the students were asking genuine questions of the situation and exposing their own feelings about their learning and the teacher's teaching through honest, non-judgmental questions and statements.

As the session opened up into more quizzing, probing, and questioning about the differences between the teacher's and students' interpretation of events, the de-briefer physically moved away from her previous central role and the students generally appeared to take control of the inquiry into the experience.

As the intensity of questions and answers subsided, the de-briefer moved back in and brought the session to a close. She introduced a review of the purpose and procedures of the session and encouraged all participants to think further about the way the session had unfolded and what they might take away from it in terms of their developing understanding of teaching and learning. They were asked to reflect upon this through writing a paper in response to the session.

The vignette attempts to place in perspective the opening up of professional critique and the explicit modelling of such an approach that gives all participants access to the thoughts, feelings and actions of all involved in the teaching and learning experience in an honest and non-judgmental way. However, coming to conceptualise teaching and learning about teaching in this way is not quite as simple as this vignette may make it appear.

Teacher Educators' Perspective on Explicit Modelling

In our teaching about teaching, we see as an important goal, the need to help our student teachers become more aware of the pedagogical reasoning that underpins practice in anticipation that by so doing, they might be more thoughtful about their own pedagogical reasoning and choices. As outlined in the vignette above, we attempt to explicitly model approaches to teaching as well as our own decision-making processes through our teaching about teaching. However, such practice carries certain risks and creates real episodes of teacher vulnerability[1]. For example, Berry (2001) discusses the difficulties she encountered as she sought to make explicit her pedagogical reasoning to her student teachers in her Biology methods class. She did so because she wanted to encourage her student teachers to see into teaching practice in ways that challenged their views of teaching as the enactment of a 'script' (White, 1989). Yet, in so doing, she found that she was faced with her own meta-questioning of what to make explicit and, that not all student teachers would necessarily recognise (or value) the purpose of such teacher educator actions.

> Even though I have identified that articulating my thinking about teaching during the act of teaching is an important goal of my teaching, I have also found that this is not an easy goal to 'live' as a teacher educator. I am not always consciously aware of my actions, in action, nor am I able to readily articulate my pedagogical reasoning on the spot. Usually, there is a multitude of thoughts running through my head as I teach. How do I know which of these is useful at any particular time to select to highlight for my students ...Making a choice about what to make explicit both in my talking about practice during classes and in my journal entries was a constant dilemma for me. I had to choose carefully what I held up for public examination that would be useful and accessible for these student teachers and in hindsight, (Berry, 2001. p2.)

And,

[1] Working alone and in isolation can exacerbate the situation as opposed to the support that is available through collaboration. There is also an important issue here in terms of experience as once one starts to learn how to talk about practice then it is easier to see appropriate opportunities for so doing.

> For me, an important purpose for the journal was to use my experiences of a session to prompt my students to reconsider their teaching and learning experiences. However, I came to recognise that this was not a view that was easily understood by them. Early in the year a student told me that there had been some discussion between class members that they would like to learn more about teaching and less about how I teach. This was further emphasised for me in an e-mail that I received not long after this discussion, from a different student. "Today Mandi stopped the class and explained why she was doing something and how she thought it would work. I really liked this but I wonder if there were some students who thought, "I really don't care". (Berry, 2001 p.6.)

Deciding which aspects of practice to make explicit, how to make them explicit, and when so that they might be useful and meaningful for student teachers is an ongoing dilemma in attempting to teach through explicit modelling. Attempting to make such explicit modelling accessible (and acceptable) for student teachers, requires careful thinking and reasoning in its own right. It could well be argued that choosing when and how to explicitly model practice comes to be understood and interpreted through phronesis, for as Berry (above) illustrated, simply knowing about it conceptually is not the same as doing it practically. Hence, the perceptual knowledge of such things as 'think aloud' is important because:

> Choosing an appropriate time to explain that I would be "thinking out loud" and the purpose for doing so was important. I had to have a sense of trust in the class and they with me otherwise my behaviour could appear to be peculiar rather than purposeful. There was a danger that talking aloud about what I was or was not doing, and why, could be interpreted as lacking appropriate direction. This could be exacerbated by the fact that many beginning teachers enter the course believing they can be told how to teach. It could be a risk which might compromise my supposed "expert" position as someone responsible for teaching teachers. (Loughran, 1995. p. 434)

Clearly then, these quotes (taken from different situations and at different times in our development of teacher educators) illustrate how we have each been confronted by

the sense of uncertainty and questioning about how and when to explicitly model our pedagogical reasoning. Fortunately, through our co-teaching and collaboration in Developing Pedagogy, we have had the support of a 'critical friend' to live through this uncertainty and to recognize the advantages for teaching and learning about teaching that occur as a result of choosing to 'talk aloud' and to explicitly model aspects of practice. However, it has been through a self-study approach to researching practice that this learning has been developed, refined and articulated most in recent times. Therefore, the importance of searching for the relationships between our developing perceptual knowledge with the conceptual knowledge within the literature has also been important.

Articulating an understandings of teaching about teaching

Self-study is often driven by a learning purpose whereby confronting dilemmas of practice helps participants learn more about their own practice. However, in so doing, there is always a need to investigate the alignment of one's intentions and practices for as Brookfield (1995) reminds us,

> What we think are democratic, respectful ways of treating people can be experienced by them as oppressive and constraining. One of the hardest things teachers have to learn is that the sincerity of their intentions does not guarantee the purity of their practice...Teaching innocently means assuming that the meanings and significance we place on our actions are the ones that students take from them...we never have full awareness of our motives and intentions, and...frequently misread how others perceive our actions... (Brookfield, 1995, p.1)

Through our examinations of our explicit modelling of practice, we purposefully seek alternative interpretations of the situations we create with our student teachers so that

we do not *teach innocently*. Just as Zeichner (1995) came to recognize a tension in his teaching that caused him to do much soul-searching

> Despite my commitment to the role of teachers as knowledge producers and to the practice of teacher research, my actual practice undermined my intended message to students. Were my students really learning about the role of teachers as knowledge producers and reformers if they never were given the opportunity to read anything written by a teacher or another student teacher? (Zeichner, 1995, p 20)

So too, in our teacher education classes (before we had the opportunity to create and teach Developing Pedagogy) we actively questioned what students were really learning about in their teaching through the existing program structure and teaching approaches we were using. Through this questioning, we came to see how participants (teacher educators and student teachers) learning by working together on the problematic nature of teaching might be enhanced if the 'normal' teaching and learning context in teacher education was challenged. This realization is borne of an acceptance that teacher educators work within an institution and institutional structures can inhibit learning about teaching. Therefore finding ways to challenge practice within the institutional context must apply to all involved or the danger would be that teacher educators would only be directing new experiences for the student teachers, but not necessarily experiencing them in a similar fashion themselves. Hence, Developing Pedagogy offered us an opportunity and a context for turning our questioning into practice (as the opening vignette we hope illustrates).

An example of this issue being similarly apprehended by others is in the work of Featherstone, Munby & Russell (1997). Their focus on student teachers' practicum

experiences became the basis for shaping their thinking about learning to teach. Through their work, themes emerged that influenced approaches to practice (of both student teachers and teacher educators alike) that illustrated how important it was to value the knowledge of the practicum in learning to teach.

> I have been reminded just how important it is that one does not underestimate the value of creating a forum for listening to students' voices. I found messages from my students at two different levels....For example, the student who said, 'You don't think that the only way we learn is if we are taking notes' caused me to think critically about what made the discussion so powerful and useful to the students in terms of their learning....Thus I decided to develop a discussion summary sheet. I am certainly not the first to think about this, but there is something special about being able to say that my decision is based on what I have learned from my students. (Featherstone, 1997, p. 136)

In this quote, Featherstone illustrates how his personal experience of using a teaching procedure in his own practice led him to better understand and value the procedure. His response was initiated as a result of an incident that arose in his own class. His student's statement reminded him of the value of listening, something that he would certainly have been aware of as a *piece of propositional knowledge* (conceptual), but something that he came to appreciate in a much more meaningful way through this particular experience (and subsequent development of perceptual knowledge).

Featherstone's situation mirrors the learning about teaching he experienced (as a student teacher in Russell's Physics Method class) through 'backtalk', yet the real meaning did not emerge for him until he was acting in the role of teacher (Russell had taught Featherstone about backtalk but it was not necessarily meaningful for him as a teacher until an incident arose in which he could recognise its purpose and act upon it

himself). Hence, the value of the learning was clearly embedded in the experience, and, in this particular case, made possible through the practicum.

As teacher educators, our work in Developing Pedagogy has led us to believe that our student teachers benefit from seeing us being challenged by the dilemmas, issues and concerns germane to teaching about teaching and , as we attempt to 'manage' these issues and dilemmas, our student teachers are able to reflect on the same processes in their teaching. Through explicit modelling such as 'talking aloud' and other instances of explaining our teaching about teaching publicly with our student teachers, we create new ways of encouraging our student teachers to grasp the possibilities for learning about teaching that are embedded in their experiences and to see these possibilities as opportunities, not instructions. In so doing, we also learn about teaching as we attempt to enact those aspects of practice we are trying to make transparent for our student teachers. This has important learning outcomes for our student teachers and is more professionally satisfying than falling back on a telling, showing guided practice approach to teaching about teaching.

Clearly, persevering with explicit modelling carries with it a certain amount of tension and uncertainty, but again, seeking to understand (in concert) our developing perceptual and conceptual knowledge is important in our approach to articulating our pedagogy.

Teaching and learning about teaching: tensions in practice

From an extensive review of the self-study literature Berry (Forthcoming) has described a set of tensions that have grown out of teacher educators' attempts to match their goals for their students' learning with the needs and concerns that student teachers express for their own learning. We focus on the notion of tensions as a way of conceptualising the complexities associated with modelling for in some ways, it could well be argued, tensions can be understood and experienced as a form of phronesis.

Tensions can be described as, at times, as being recognizable through the conflicting purposes which comprise the ever present ambiguity of teacher educators' work. An example of such a situation is through the tension between *telling and growth*, which may be experienced by teacher educators in two ways: between informing and creating opportunities to reflect and self-direct; and, between acknowledging student teachers' needs and concerns and challenging them to grow beyond their immediate preoccupations.

Explicit modelling then begins to highlight such tensions in practice because they are embedded within the modelling and create situations that need to be balanced, or managed. Therefore, if we examine such a situation through the tension (between telling and growth listed above), selecting what to highlight to bring to student teachers' attention while at the same time helping student teachers know that this is worth paying attention to even though they may not immediately see the value of the approach is an immediate tension that impacts practice.

Telling and Growth: impact on practice

We concentrate on the tension (*between telling and growth*) as an example of finding a balance between the applicability and value of episteme and phronesis as one way of conceptualising tensions and using them as a sign-post for learning to understand and articulate approaches to teaching and learning about teaching. In so doing, we hope that such an exploration might help others see how tensions impact on practice and to bring into focus approaches to teaching about teaching that might make more tangible the relationship between episteme and phronesis. The purpose of pursuing an understanding of our practice in this way is partly in response to Myers (2002) concern that:

> ...the widely practiced approach to teacher education is an approach that stresses telling, showing, and guided practice, an approach that is in conflict with current ideas about how learning occurs and how teaching can best produce learning. This existing out-of-date approach assumes that learning to teach is a rather static process by which more experienced and better read teacher educators tell their teachers-in-training what good teaching is, show them how to do it, and guide them as they try to do it themselves. It presumes that the "stuff" of teaching is a rather stable, already known general set of principles and skills that are to be handed down from one generation of artisans to another. This view of teaching also conflicts with the thrust of...ideas about how learning occurs. It conflicts with what informed teacher educators "tell" their students about the nature of constructivist learning and teaching. There is then an ongoing contradiction between what we know about learning and teaching and what we do as teachers of teachers. One wonders whether we see the contradiction or are simply reluctant to change. (p. 131)

In the first instance, the tension *between telling and growth* hinges on an acceptance that *telling* is most commonly an attempt to transfer propositional knowledge (that which might apply generally to many different situations, ie. episteme, Korthagen et al., 2001) from the teacher to the student and, that although such transfer may occur, it

does not carry sufficient understanding to the receiver of the information to be personally meaningful. For example, in many teacher education programs classroom management is recognised as comprising a complex array of skills to be mastered by student teachers, yet when being 'taught' about such skills, student teachers often attend a lecture on 'what to do' and 'how to act' in concert with the delivery of theoretical perspectives on primary and secondary behaviours (see Rogers, 1998[2] for a full explanation of these behaviours). This is in stark contrast to 'how they do act' and 'what they will do' when confronted by difficult classroom management situations in their own teaching, they may know what to do but do not know how to do it.

The teacher educator is then confronted by a real tension. It may be clear what student teachers "need to know", but this is very different from them knowing how to act. Hence the teacher educator struggles between informing (delivering the propositional knowledge) and creating opportunities to reflect and self-direct (making experiences about the issues personally meaningful). As briefly noted above, this tension is also exacerbated by moderating between acknowledging the student teachers' needs and concerns and challenging them to grow. Interestingly, just as student teachers may not be helped by the delivery of episteme but rather need to develop their understanding through phronesis, so too teacher educators face the same difficulty in their learning of teaching about teaching – which highlights the problematic nature of teaching about teaching (i.e in many situations, teacher educators also need to develop their understanding through phronesis rather than

[2] Rogers (1998) notes that, "Another way of looking at attention-seeking behaviour is to view the behaviour cycle as progressive: from the primary disruption through to secondary attention – or power-seeking behaviours...The problem with secondary behaviour is that it is so easy to get emotionally caught up with it, speak to it, and never really direct ownership to the real issue...Secondary behaviour includes sighing, pouting, sulking, a range of 'tantrumming' behaviours, and eyes rolled to the ceiling. Students will sometimes answer back, procrastinate, or want to have the last word." (pp. 29 - 30)

through epistemic categorization). This very point is raised by Noddings (2001) when she notes that, "I do not think the tension between shaping students toward some preestablished ideal and encouraging them to grow in directions they themselves choose can be resolved. It is a tension that has to be lived" (p. 103). And it has to be lived by both student teachers and teacher educators. We explain this through a brief example from our own practice and, in so doing, introduce student teachers' experiences of learning to teach through Developing Pedagogy.

Student teachers' experiences of explicit modelling

The extract that follows is taken from an incident in the extended peer teaching in Developing Pedagogy and draws attention to the difference between talking about classroom management procedures and being confronted by one's own actions when embroiled in a classroom management situation. It also illustrates how our pedagogic interventions are part of our approach to explicit modelling.

> Adam and Ben chose to teach the group about Buddhism. They had prepared a long and difficult text to explain Buddhism and they put it up for the class to read on the overhead projector.
>
> "How could anyone see that, let alone understand it?" I [Mandi] thought. "Yet no one is saying anything! Why are they all so polite?", I asked myself. "I can't read that!" I said aloud, sounding more aggressive than I actually intended. "It doesn't make sense!"
>
> Adam's response to this interjection was to read the overhead text aloud. John picked up on my intervention and pushed it along: "Yeah, what's the difference between Buddhism and Hare Krishna anyway?" Adam began a polite explanation but John interrupted: "Sounds stupid to me. Buddhism is dumb." Adam paused. Ben, his teaching partner, stood silent.
>
> "Come on, are you going to deal with me?" John continued. Adam and Ben did nothing. In fact, no one did anything. I wondered whether

> John had pushed this too far. What did he think he was helping them to learn about teaching? "Deal with me!" he repeated. But Ben and Adam didn't seem to know what to do, where to look, or how to act. I could feel their anguish. A long and painful silence followed. Finally, a class member spoke up.
>
> "That's inappropriate behaviour, John. Stop it!" she said. Claire had picked up on what was happening and she used the moment to show the others how a confrontation like this might be handled. The purpose had now been realised and Ben and Adam 'felt' what it was like to be in a confronting classroom situation. All of us had!
>
> John's intervention was direct and persistent, pushing the boundaries of commonly acceptable teacher educator behavior....It also highlighted important differences about approaches to interventions that we were prepared to risk. Intervening in this way was not an option Mandi had considered or would have felt comfortable trying, but it provided a valuable opportunity to see what could be learnt when someone is prepared to take such a risk. (Berry & Loughran, 2002, pp. 21 – 22)

In this example (above), the student teacher has been confronted by a real situation. The situation is a concrete experience that carries with it his, "emotions, images, needs, values, volitions, personal hang-ups, temper, character traits, and the like" (Korthagen et al., 2001, p. 27). The experience has created a real example of how he feels such that his perception of his actions is embedded in what he actually did – or in this case, did not do. He is not in a position where he is thinking about a "given scenario" and attempting to rationally determine appropriate actions or to apply conceptual knowledge to resolve (or explain) the situation. In this case, Adam has experienced what it is like to be in a confronting classroom situation, and he knows how he did act; he has begun to develop his perceptual knowledge of the situation.

We would argue that it is in the 'living through' of experiences of this kind that the real learning about teaching occurs because,

> The point of *phronesis* is that the knowledge a student needs is perceptual instead of conceptual. Therefore, it is necessarily internal to the student, that is, it is in the student's experience instead of outside it in some external conceptual form. . And so there is nothing or little to transmit, only a great deal to explore. And the task of the teacher educator is to help student teachers explore and refine their perceptions...[through] the opportunity to reflect systematically on the details of their practical experiences. (Korthagen et al., 2001, p. 29)

Therefore, in reconsidering the episode (above) a number of important teaching and learning about teaching issues emerge. First, creating a context for student teachers to 'feel' what it is like to be in a 'given situation' may be of little real value (and in fact be hurtful) if instituted in isolation. Secondly, simply creating such situations to then offer the 'correct' response or to introduce the epistemic knowledge that would explain one's actions is neither the purpose nor the intention of the experience. Thirdly, just as the tension between *telling and growth* may have influenced the pedagogy employed, many actions in teaching and learning about teaching are connected and carry associated implications and consequences that need to be apprehended (by all participants). In this case, the tension between *discomfort and challenge* is immediately highlighted and needs to be addressed, but it should not cause a loss of focus on the original actions and the purpose of those actions. Finally, the 'big picture' needs to be constantly to the fore such that re-examining the situation through purposeful de-briefing and systematic reflection offers insights into the experience from different perspectives (framing and reframing must be an explicit pedagogical outcome) – and this needs to be understood as a time consuming and recursive task.

As noted earlier, recognising the value in differentiating between episteme and phronesis is important not only for helping student teachers come to learn about

teaching through the development of their own perceptual knowledge, but also for teacher educators in their learning of teaching about teaching through recognition of the links between their conceptual (episteme) and perceptual (phronesis) knowledge. It is in this very issue that the tension between telling and growth is lived out through pedagogy and, we believe, that teacher educators need to experience this side of the process in the same way that student teachers need to experience the development of their perceptual knowledge through their own learning (as in Ben and Adam's case). Hence, coming to understand what informs one's teaching about teaching is just as important as how one teaches about teaching such that identifying with Berry's (Forthcoming) tensions offers access to pedagogy in ways that inform, not constrict practice. That is, understanding these tensions through practice can help to make the tacit nature of teaching about teaching explicit for oneself and one's students. It therefore becomes an approach to explicit modelling of the problematic nature of teaching and learning and is understood, initially, perceptually not conceptually.

Portraying tensions through modelling

Creating contexts for student teachers to develop their perceptual knowledge of learning about teaching, we argue, is enhanced when the pedagogical reasoning that underpins teacher educators' practice is made clear and explicit. But, such explicit modelling in our own practice must be to make clear – not simply transmit – the thoughts and actions of practice for all participants to be able to deliberately reflect upon. For example, in the episode of Ben and Adam's teaching above, after Claire had intervened and demonstrated what might be done, the experience was then immediately de-briefed and unpacked to access the pedagogical reasoning of all

involved (student teachers and teacher educator). So an important aspect of explicit modelling is that problematic situations are not only created within and by the group, but these situations are then examined and reflected upon in a deliberate and purposeful fashion. Thus, these student teachers, rather than being told how to act, experience the range of actions (and reactions) of the group as they have immediate access to the thoughts, feelings and actions of the various participants. They become more in touch with the development of their perceptual knowledge through comparing their own response to the situation with what they already know and feel, and with the responses and feelings of others. However, it is important to note that this process is not a search for right and wrong ways of acting (or reacting) but rather an attempt to make pedagogical reasoning explicit and accessible to all.

A consequence of this aspect of explicit modelling is that the situations we create for our student teachers we also experience (as both teachers and learners). Korthagen et al's (2001) reminder that, "...the task...is to help student teachers explore and refine their perceptions" (p. 29) applies equally to us in all of the situations we live with our student teachers. This is an important aspect of modelling for if we were to offer epistemic explanations to our student teachers about the situations we create in class, then we would most likely not help student teachers to develop insights into the problematic nature of practice; although it might help us to feel 'right' in explaining our actions, ie. theory underpins our practice. In contrast, we believe that insights are more likely developed by being involved together, hearing others' (students and teachers) explanations of their different perspectives on episodes. This then offers opportunities for perceptual knowledge to be developed, framed and reframed by all participants. If we did not explicitly model this process of

explaining and exploring perspectives through our practice, we would be in danger of simply offering our conceptual knowledge, albeit in perhaps more confronting and demanding ways, but it would really only be another form of delivery; telling as opposed to teaching, or using Myers's (2002) terms, telling, showing and guided practice. Hence there would be little change to the traditional approach to teacher education.

Overview

Substantial research efforts in past decades have resulted in the accumulation of a considerable body of knowledge about teaching and teacher education. A good deal is known about the background and experience of teacher educators, the nature and purpose of teacher education, the status of teaching and teacher education and the work of faculties of education. Yet teacher educators turning to the research literature to locate knowledge that addresses the nature of teaching about teaching, or to hear the voices of teacher educators themselves in education research, uncovers comparatively little (Richardson, 1996; Wideen et al, 1998). The paucity of such research is no doubt disappointing to many involved in teacher education but it also helps to account for the lack of documentation about approaches to teaching about teaching that go beyond the simple delivery of tips and tricks (and we also trust that this paper is not interpreted as a portrayal of "different" tips and tricks).

The lack of research in teaching about teaching by teacher educators themselves may have as much to do with the fact that teacher educators' work has not (until recently) been valued as a form of specialised expertise within academia. It may

also be linked to notions of teaching itself (as an under theorized field) similarly being applied to teaching about teaching. Compounding this difficulty is the view that teacher education should prepare student teachers for the demands of full-time teaching and, teacher education from this perspective is more about socialization (see Zeichner & Gore, 1990) rather than developing an appreciation of the complexity of teaching and learning. The pursuit of understanding of teaching about teaching therefore remains undervalued and has not necessarily been all that well informed by past research.

In challenging the situation (so briefly outlined) above, a beginning point is in conceptualizing teaching about teaching as problematic and, one aspect of problematizing practice is through an appreciation of the tensions created in attempting to respond to *the unbridgeable gap between words and experiences*. Through this examination of our approach to explicit modelling we hope to make clear ways of challenging the status quo of learning about teaching in 'traditional' teacher education programs. We also believe that an articulation of teacher education practices may be better conceptualised through apprehending the value of the theoretical framework associated with episteme and phronesis. Our articulation, we briefly raise through the following four aspects of practice and, although they cannot (and should not) be scripted, we believe they can be anticipated in ways that make them instructive in teaching about teaching. When used as a way of viewing teaching and learning about teaching, we believe that they can also be powerful shaping factors in finding approaches to respond to the ever present theory-practice gap that appears to be exacerbated by 'traditional' teacher education program structures and approaches.

Although these four aspects have been articulated through our experiences of Developing Pedagogy, they have also impacted on our teaching about teaching generally. The change in context (the opportunity to reconsider the taken-for-granted aspects of practice created through Developing Pedagogy) allowed us to see beyond 'traditional' teacher education approaches and has encouraged us to be responsive to other contexts in return.

1) Professional critique offers ways of seeing into experience

How we teach has much greater impact on student teachers' thinking about practice than what we teach (Russell, 1997). However, *unpacking* teaching by professionally critiquing experiences requires skills, abilities and attitudes that need to be recognised and developed by student teachers and teacher educators alike. Creating opportunities for doing this creates real situations for examining how we teach as opposed to what we teach and leads to the development of perceptual knowledge for all participants.

2) Seeing different types of teaching decisions in action helps to highlight the problematic nature of teaching

Decision-making in teaching happens on different levels. To help student teachers be informed about their own pedagogical reasoning, teacher educators need to highlight differences between the kinds of teaching decisions they make and the impact of their thinking on their subsequent actions and create opportunities for student teachers to recognise how these impact on their learning.

3) Genuinely searching for differences between actions and intent

Many teachers (experienced and inexperienced) struggle to recognize differences between what they intend to teach and their actual teaching behaviours. By honestly exploring alternative perceptions of the relationship between what is taught, how it is taught and what is learnt through shared experiences, teachers (student teachers and teacher educators) are offered opportunities to see their practice through others' eyes.

4) Valuing collaboration and co-teaching

Experiences that revolve around collaboration and the sharing of ideas and perspectives on practice help in reframing (Schon, 1983). Through co-teaching teacher educators and student teachers are able to access possibilities for learning that are not so likely when working alone.

Conclusion

This paper illustrates for us what we see as an important challenge for teacher educators to face in attempting to find new ways of creating learning about teaching opportunities for student teachers that will be meaningful for them in their own professional development and growth. This is not a simple task, but such work is crucial to an articulation that might be valuable for the education community to learn from and build upon and, it matters if as a community of educators we are to begin to address Myers (2002) concerns about the unchanging pedagogy of telling, showing, guided practice.

Through the approach to better understanding teaching and learning about teaching that we have begun to articulate in this paper, we trust that it is an impetus for others to begin to move toward an articulation of some aspects of their own pedagogy of teacher education. This we see as an important outcome for the development of a genuine knowledge base of teaching about teaching. However, we also acknowledge the limitations of text in conveying perceptual knowledge compared with conceptual knowledge; an interesting paradox in attempting to portray the very issues with which we are concerned in teaching about teaching. But not a reason to avoid trying.

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